

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for extracting and reformatting web page content into a format readable on a mobile device, comprising:

providing a secure connection between said mobile device and a proxy server;

generating a user request from said mobile device for a web page having a first format, wherein said web page resides on an origin web server;

forwarding said user request from said proxy server to said origin web server;

receiving at said proxy server said web page from said origin web server;

site-mining₁ at said proxy server₁ to extract content from said web page according to a predefined criteria; and

transmitting to said mobile device said site-mined desired content using said secure connection.

2. (previously presented) The method according to claim 1, wherein said site-mining comprises:

identifying portions of source code corresponding to said desired content of said web page, wherein said source code is comprised of objects; and

creating at least one expression using at least one predefined site-mining method, wherein said expression site-mines an object referenced in said at least one expression.

3. (previously presented) The method according to claim 2, further comprising:

storing said site-mined desired content in a cache prior to said transmitting.

4. (previously presented) The method according to claim 2, further comprising the step of:

storing said site-mined desired content having a first format in a cache prior to said site-mining.

5. (previously presented) The method according to claim 1, further comprising:

reformatting said site-mined desired content in accordance with predetermined instructions for at least two mobile devices having a predefined common characteristic.

6. (previously presented) The method according to claim 5, wherein said predefined characteristic comprises at least one of:

a type of operating system,
a type of browser, and
a manufacturer.

7. (previously presented) The method according to claim 1, further comprising:

reformatting said site-mined desired content in accordance with predetermined instructions to a particular mobile device.

8. (previously presented) The method according to claim 7, wherein:

said mobile device is defined by said manufacturer and model.

9. (previously presented) The method according to claim 1, further comprising:

reformatting said site-mined desired content in accordance with predetermined instructions for a particular web page.

10. (previously presented) The method according to claim 1, further comprising:

reformatting said site-mined desired content in accordance with predetermined instructions to all web pages.

11. (previously presented) The method according to claim 1, wherein:

said secure connection is a secure socket layer connection.

12. (previously presented) The method according to claim 1, further comprising:

providing a secure connection between said proxy server and said origin web server.

13. (previously presented) The method according to claim 12, wherein:

said secure connection is a secure socket layer connection.

14. (previously presented) The method according to claim 1, further comprising:

reformatting said site-mined desired content using at least one predefined transform, said transform comprising at least one of:

adding meta tag information to a header of said web page,
adding a specific attribute and an attribute value to a specific tag associated with said web page,

ignoring a previously specified global conversion,
inserting text into said web page from a specified file,
removing a specific attribute from all tags associated with said web page,

removing a specific attribute from a specific tag associated with said web page,

removing a comments tag from said web page,
removing a portion of said content from said web page,
removing a specific tag from said web page,
removing a specific tag and all said information that appears within said tag from said web page,

replacing a first tag associated with said web page with a second tag associated with said web page,

setting a specific value of a specific attribute of a specific tag,

stopping processing of subsequent reformatting commands,
substituting a first sequence of text for a second sequence of text, and

removing table formatting.

15. (previously presented) The method according to claim 1, wherein:

said secure connection is between a gateway operatively communicable with said mobile device and said proxy server.

16-32. (canceled)

33. (previously presented) A system for extracting and reformatting web page content into a format readable on a mobile device, comprising:

a module to receive a secure user request for a web page having a first format from at least one mobile transmission device;

a proxy server that receives said user request, forwards said request to an origin web server, receives said requested web page having said first format from said origin web server, site-mines said web page to extract content from said web page according to a predefined criteria, and reformats at least a portion of said site-mined content from said web page having said first format, for transmission to said at least one mobile transmission device, in accordance with at least one of a type of content viewer and a type of operating system associated with said mobile device said content is viewable on.

34. (previously presented) The system according to claim 33, wherein said proxy server comprises:

a storage repository that contains at least one data file associated with each of said at least one mobile transmission device; and

a conversion engine that receives said requested web page and site-mines and reformats at least a portion of said content from said web page having said first format, for transmission to said at least one mobile device, in accordance with one or more predetermined instructions in each of said at least one data file associated with each of said at least one mobile transmission device.

35. (previously presented) The system according to claim 34, further comprising:

a cache that stores said requested web page prior to transmitting said extracted and reformatted web content to said at least one mobile transmission device.

36. (previously presented) The system according to claim 33, wherein:

at least one of said data files is defined for at least two mobile devices having a predefined common characteristic.

37. (previously presented) The system according to claim 36, wherein said predefined characteristic is at least one of:

a type of operating system,
a type of browser, and
a manufacturer.

38. (previously presented) The system according to claim 33, wherein:

at least one of said data files is defined for a particular type of mobile device.

39. (previously presented) The system according to claim 38, wherein:

said particular type of mobile device is defined by said manufacturer and model.

40. (previously presented) The system according to claim 33, wherein:

at least one of said data files is defined for a particular web page.

41. (previously presented) The system according to claim 33,
wherein:

at least one of said data files is applied to all web pages.

42. (previously presented) The system according to claim 33,
wherein:

said secure connection is provided by using a secure socket layer
connection.

43. (previously presented) The system according to claim 33,
wherein:

a secure connection is provided between said proxy server and
said origin web server.

44. (previously presented) The system according to claim 43,
wherein:

said secure connection is a secure socket layer connection.

45. (previously presented) The system according to claim 33, wherein:

said reformatting is done in accordance with at least one predefined transform associated with said at least one mobile device, said at least one predefined transform comprising:

at least one of adding meta tag information to a header of said web page,

adding a specific attribute and an attribute value to a specific tag associated with said web page,

ignoring a previously specified global conversion,

inserting text into said web page from a specified file,

removing a specific attribute from all tags associated with said web page,

removing a specific attribute from a specific tag associated with said web page,

removing a comments tag from said web page,

removing a portion of said content from said web page,

removing a specific tag from said web page,

removing a specific tag and all said information that appears within said tag from said web page,

replacing a first tag associated with said web page with a second tag associated with said web page,

setting a specific value of a specific attribute of a specific tag,

stopping processing of subsequent reformatting commands,

substituting a first sequence of text for a second sequence of text, and

removing table formatting.

46. (previously presented) The system according to claim 33, wherein:

said secure connection is provided via a gateway operatively communicable with said mobile device and said proxy server.

47-57. (canceled)

58. (currently amended) A computer storage medium storing instructions executable by a computer, the instructions instructing the computer to execute extracting and reformatting web page contents for subsequent transmission to a mobile device, said instructions comprising:

providing a secure connection between a mobile device and a proxy server;

generating a user request from said mobile device to said proxy server for a web page having a first format, wherein said web page resides on an origin web server;

forwarding said user request from said proxy server to said origin web server;

receiving at said proxy server said web page from said origin web server;

site-mining₁ at said proxy server₁ to extract content from said web page according to a predefined criteria; and

transmitting to said mobile device said site-mined desired content using said secure connection.

59. (previously presented) The computer storage medium according to claim 58, wherein:

said secure connection is provided by a Hypetext Transport Protocol (HTTPS).

60. (previously presented) The computer storage medium according to claim 58, wherein said extracting instructions comprise:

identifying portions of source code corresponding to said desired content of said web page, wherein said source code is comprised of objects; and
creating at least one expression using at least one predefined site-mining rule, wherein said expression site-mines an object referenced in said at least one expression.

61. (previously presented) The computer storage medium according to claim 60, further comprising:

instructions for storing said site-mined desired content in a cache prior to transmitting.

62. (previously presented) The computer storage medium according to claim 60, further comprising:

instructions for storing said site-mined desired content having a first format in a cache prior to site-mining.

63. (previously presented) The computer storage medium according to claim 58, wherein:

said reformatting instructions are applied in accordance with predetermined instructions for at least two mobile devices having a predefined common characteristic.

64. (previously presented) The computer storage medium according to claim 63, wherein said predefined characteristic is at least one of:

a type of operating system,
a type of browser, and
a manufacturer.

65. (previously presented) The computer storage medium according to claim 58, wherein:

said reformatting instructions are applied in accordance with predetermined instructions to a particular mobile device.

66. (previously presented) The computer storage medium according to claim 65, wherein:

said mobile device is defined by a manufacturer and model.

67. (previously presented) The computer storage medium according to claim 58, wherein:

said reformatting instructions are applied in accordance with predetermined instructions for a particular web page.

68. (previously presented) The computer storage medium according to claim 58, wherein:

said reformatting instructions are applied in accordance with predetermined instructions to all web pages.

69. (previously presented) The computer storage medium according to claim 58, wherein:

said secure connection is a secure socket layer connection.

70. (previously presented) The computer storage medium according to claim 58, further comprising:

instructions for providing a secure connection between said proxy server and said origin web server.

71. (previously presented) The computer storage medium according to claim 70, wherein:

said secure connection is a secure socket layer connection.

72. (previously presented) The computer storage medium according to claim 58, wherein said reformatting instructions comprise at least one of:

- adding meta tag information to a header of said web page,
- adding a specific attribute and an attribute value to a specific tag associated with said web page,
- ignoring a previously specified global conversion,
- inserting text into said web page from a specified file,
- removing a specific attribute from all tags associated with said web page,
- removing a specific attribute from a specific tag associated with said web page,
- removing a comments tag from said web page, removing a portion of said content from said web page,
- removing a specific tag from said web page,
- removing a specific tag and all said information that appears within said tag from said web page,
- replacing a first tag associated with said web page with a second tag associated with said web page,
- setting a specific value of a specific attribute of a specific tag,
- stopping processing of subsequent reformatting commands,
- substituting a first sequence of text for a second sequence of text,

and

- removing table formatting.

73. (previously presented) The computer storage medium according to claim 58, further comprising:

- instructions for providing said secure connection between a gateway operatively communicable with said mobile device and said proxy server.

74-105. (canceled)

106. (currently amended) A method for extracting, filtering and reformatting web page content into a format readable on a mobile device at a proxy server, comprising:

site-mining to extract content from a web page according to a predefined criteria at said proxy server;

reformatting₁ at said proxy server₁ said site-mined web page content in accordance with a limitation associated with said mobile device said web page site-mined desired content is viewable on, said limitation comprising at least one of a type of content viewer and a type of operating system provided by said mobile device; and

transmitting said filtered and reformatted web page content to said mobile device.

107. (currently amended) A system for reformatting content into a format readable on a mobile device, comprising:

a site-miner₁ at a proxy server, said site-miner to extract content from a web page according to a predefined criteria;

a reformatter₁ at said proxy server, ~~said reformatter~~ to reformat said site-mined desired content in accordance with a limitation associated with said mobile device said site-mined desired content is viewable on, said limitation comprising at least one of a type of content viewer and a type of operating system provided by said mobile device; and

a transmitter to transmit said filtered and reformatted content to said mobile device.

108. (currently amended) A system for reformatting web page content into a format readable on a mobile device, comprising:

a site-mining module, ~~means for site-mining~~ at a proxy server, to extract content from a web page according to a predefined criteria;

a reformatting module, ~~means for reformatting~~ at said proxy server, to reformat said site-mined desired content in accordance with said limitation associated with said mobile device said site-mined desired content is viewable on, said ~~limitation~~ reformatting module comprising at least one of a type of content viewer and a type of operating system associated with said mobile device; and

a transmitting module to transmit ~~means for transmitting~~ said filtered and reformatted web page content to said mobile device.

109. (currently amended) A method for extracting and reformatting web page content into a format tailored for a mobile device, comprising:

providing a connection between said mobile device and a proxy server;

providing mobile device related information to said proxy server from said mobile device, said mobile device related information comprising at least one of a type of content viewer and a type of operating system associated with said mobile device;

receiving a web page from an origin web server;

site-mining, at said proxy server, to extract content from said web page according to a predefined criteria ~~at said proxy server;~~

conversion, at said proxy server, of said site-mined content based on said mobile device related information ~~at said proxy server;~~ and

forwarding said converted content to said mobile device.

110. (previously presented) The method for extracting and reformatting web page content into a format readable on a mobile device according to claim 109, wherein:

said mobile device related information is provided to said proxy server from said mobile device in a header.

111. (previously presented) The method for extracting and reformatting web page content into a format readable on a mobile device according to claim 109, further comprising:

comparing said mobile device related information to a client value stored in said proxy server for said mobile device.

112. (previously presented) The method for extracting and reformatting web page content into a format readable on a mobile device according to claim 109, wherein said mobile device related information is at least one of:

- a make;
- a model;
- a Web browser type; and
- an operating system.

113. (previously presented) A proxy server for extracting and reformatting web page content into a format tailored for a mobile device, comprising:

- a first communication channel to establish communications between said mobile device and said proxy server and to provide mobile device related information to said proxy server from said mobile device, said mobile device related information comprising at least one of a type of content viewer and a type of operating system associated with said mobile device;

- a second communication channel to establish communications between said proxy server and an origin web server;

- a site-miner to extract content from a web page according to a predefined criteria;

- a converter to convert said site-mined content based on mobile device related information received over said first communications channel; and

- a forwarder to forward said converted site-mined subset of content to said mobile device.

114. (previously presented) The proxy server according to claim 113, wherein:

- said mobile device related information is provided in a header.

115. (previously presented) The proxy server according to claim 113, further comprising:

- a comparator to compare said client device related information to a mobile value stored in said proxy server for said mobile device.

116. (previously presented) The proxy server according to claim 113, wherein said mobile device related information is at least one of:

- a make;
- a model;
- a Web browser type; and
- an operating system.

117. (currently amended) Apparatus for extracting and reformatting web page content into a format tailored for a mobile device, comprising:

a connection module to provide ~~means for providing~~ a connection between said mobile device and a proxy server;

an information module to provide ~~means for providing~~ mobile device related information to said proxy server from said mobile device, said mobile device related information comprising at least one of a type of content viewer and a type of operating system associated with said mobile device;

a site-mining module ~~means for site-mining~~ to extract content from a web page according to a predefined criteria;

a conversion module, ~~means for conversion~~ at a proxy server, ~~of to~~ convert said site-mined content based on said mobile device related information; and

a forwarding module to forward ~~means for forwarding~~ said converted content to said mobile device.

118. (currently amended) The apparatus for extracting and reformatting web page content into a format readable on a mobile device according to claim 117, wherein:

said information module ~~means for providing said mobile device related information~~ provides said mobile device related information to said proxy server from said mobile device in a header.

119. (currently amended) The apparatus for extracting and reformatting web page content into a format readable on a mobile device according to claim 117, further comprising:

a comparison module to compare ~~means for comparing~~ said mobile device related information to a client value stored in said proxy server for said mobile device.

120. (previously presented) The apparatus for extracting and reformatting web page content into a format readable on a mobile device according to claim 117, wherein said client device related information is at least one of:

- a make;
- a model;
- a Web browser type; and
- an operating system.